

Claims

What is claimed is:

1. A method of providing version-specific information associated with a file stored in a computer system to an application, the method comprising:

receiving a request to create a version-specific attribute, wherein the attribute is associated with the file;

5 maintaining the version-specific attribute to reflect relevant updates to the file by automatically invalidating the version-specific information in response to predetermined access requests;

receiving a request by the application to evaluate the version-specific attribute;

and

10 providing the version specific information to the application in response to the request to evaluate the version specific attribute.

2. A method as defined in claim 1 wherein the application is a virus scan application.

3. A method as defined in claim 1 wherein the application is a replicator application.

4. A method as defined in claim 1 wherein the version-specific attribute comprises meta information and mask information, the mask information providing information related to which predetermined events invalidate the version-specific attribute.

5. A method as defined in claim 1 wherein the predetermined event is an update to file data.

6. A method as defined in claim 1 further comprising:

providing mask information as part of the version-specific attribute; and

determining the predetermined event based on the mask information.

7. A method of as defined in claim 1 wherein the method further comprises:
providing security information within the version-specific attribute.
8. A method as defined in claim 1 wherein the invalidating act further comprises deleting the version-specific attribute.
9. A computer program product readable by a computer and encoding instructions for executing the method recited in claim 1.
10. A method of accessing a file stored in a computer system, the file having an associated version-specific attribute, said method comprising:
receiving an access attempt relating to an access request;
determining whether the access attempt relates to an invalidating access;
if the access attempt relates to an invalidating access:
invalidating the version-specific attribute;
performing the access operation related to the access request; and
if the access attempt does not relate to an invalidating access then performing the access operation related to the access request.
11. A method of accessing a file as defined in claim 10 wherein if the access attempt does not relate to an invalidating access, then said method further comprises:
determining whether the access depends on the version specific attribute;
if the access does not depend on the version specific attribute, then performing the access operation related to the access request;
if the access depends on the version specific attribute:
determining whether the attribute is valid;

performing a predetermined operation based on whether the attribute is determined to be valid.

12. A computer program product readable by a computer and encoding instructions for executing the method recited in claim 10.

13. A computer-readable medium having stored thereon a data structure, wherein the data structure comprises:

an actual file data section containing actual file data;

a header section; and

5 a version specific attribute section, wherein the version-specific attribute section may be created by a third party application, and wherein the version-specific attribute may be invalidated in response to a predetermined event.

14. A computer-readable medium as defined in claim 13 wherein the version-specific attribute comprises:

a meta information section for storing the name of the attribute;

5 a version information section for storing information related to the version of the third party application used to create the version-specific application; and

a mask information section for storing information related to predetermined events for invalidating the version-specific attribute.

15. A system as defined in claim 14 wherein the third party application performs virus scanning functions and wherein the version information section stores information related to a virus definition file.

16. A system as defined in claim 14 wherein the predetermined event relates to a modification of the data structure.

17. A computer program product readable by a computer and encoding instructions for executing a computer process for managing version-specific information for a file within a file system, said computer process comprising:

5 storing version-specific information as an attribute to create a version-specific attribute for the file; and
invalidating the version-specific attribute in response to a predetermined access attempt.

18. A computer program product as defined in claim 17 the computer comprises a file system and the acts of storing and invalidating are performed by the file system.

19. A computer program product as defined in claim 17 wherein the version-specific information relates to third party application information.

20. A computer program product as defined in claim 19 wherein the third party application performs virus scanning functions and wherein the predetermined access attempt relates to a modification of the file.

21. A computer program product as defined in claim 20 wherein the version-specific attribute remains following one of the following access attempts: copy, rename or backup.